Claims PTO

1. (Amendment) A mobile communication apparatus having an antenna which transmits and receives radio waves, an RF power amplifier which amplifies a power-modulated RF signal and feeds the amplified signal to said antenna, a receiver section which processes an RF signal received by said antenna, a control section which controls these functional sections, and a battery which supplies a power voltage to these functional sections, said RF power amplifier comprising amplifying elements of multiple stages which amplify the RF signal, an input matching circuit which implements impedance matching for the input, an inter-stage matching circuit which implements impedance matching between said amplifying elements, and an output matching circuit which has means of varying the state of impedance matching of the output in proportion to the level of the power voltage which is applied to said amplifying elements.

2. (Amendment) A mobile communication apparatus according to claim 1, wherein said means of varying the state of impedance matching of the output in proportion to the level of the power voltage comprises a variable capacitance element.

3. A mobile communication apparatus according to claim 2, wherein said variable capacitance element comprises a MOS-type element.

4. A mobile communication apparatus according to claim 3, wherein said MOS-type element has a surface inverting layer.

5. (Amendment) A mobile communication apparatus according to claim 1, wherein said means of varying the state of impedance matching of the output in proportion to the level of the power voltage is formed of an inverter which receives the power voltage and a varicap diode which has application of the output of said inverter.

6. (Amended) A mobile communication apparatus according to claim 1, wherein said amplifying element comprises an insulated-gate field-effect transistor.

7. (Amended) A mobile communication apparatus according to claim 1, wherein said amplifying element comprises insulated-gate field-effect transistors connected in parallel.

8. (New) A mobile communication apparatus according to claim 2, wherein said amplifying element comprises an insulated-gate field-effect transistor.

9. (New) A mobile communication apparatus according to claim 3, wherein said amplifying element comprises an insulated-gate field-effect transistor.

10. (New) A mobile communication apparatus according to claim 4, wherein said amplifying element comprises an insulated-gate field-effect transistor.

11. (New) A mobile communication apparatus according to claim 5, wherein said amplifying element comprises an insulated-gate field-effect transistor.

12. (New) A mobile communication apparatus according to claim 2, wherein said amplifying element comprises insulated-gate field-effect transistors connected in parallel.

13. (New) A mobile communication apparatus according to claim 3, wherein said amplifying element comprises insulated-gate field-effect transistors connected in parallel.

14. (New) A mobile communication apparatus according to claim 4, wherein said amplifying element comprises insulated-gate field-effect transistors connected in parallel.

15. (New) A mobile communication apparatus according to claim 5, wherein said amplifying element comprises insulated-gate field-effect transistors connected in parallel.